



10/721,167 Pending Independent Claims

13. (New) An audio signal recording disc encoded by a method which comprises the steps of:

    implementing matrix operation between a first audio signal and a second audio signal to generate a first channel signal and a second channel signal correlating with each other, the first audio signal and the second audio signal relating to a same sampling frequency;

    subjecting the first channel signal and the second channel signal to lossless encoding to convert the first channel signal and the second channel signal into an encoding-resultant signal from which a decoding side can reproduce the first audio signal and the second audio signal;

    wherein the subjecting step comprises:

        1) selecting a first sample among samples of the first channel signal for every prescribed interval of frame;

        2) selecting a first sample among samples of the second channel signal for every prescribed interval of frame;

        3) selecting one from first different linear prediction methods and predictively encoding the first channel signal according to the selected one of the first different linear prediction methods, wherein the first different linear prediction methods are of predicting the first channel signal from a past condition of the first channel signal to generate **first different prediction signals for the first channel signal**, and generating first prediction-error signals representing differences between the first channel signal and the first different prediction signals respectively, and wherein the selected first linear prediction method generates a smallest of the first prediction-error signals;

        4) selecting one from second different linear prediction methods and predictively encoding the second channel signal according to the selected one of the second different linear prediction methods, wherein the second different linear prediction methods are of predicting the second channel signal from a past condition of the second channel signal to generate **second different prediction signals for the second channel signal**, and generating second prediction-error signals representing differences between the second channel signal and the second different prediction signals respectively, and wherein the selected second linear prediction method generates a smallest of the second prediction-error signals; and

        5) generating a signal of a predetermined format having a header information area and a user data area, wherein the user data area includes an audio packet, and loading the header information with SCR information and loading the audio packet with the selected first sample of the first channel signal, the selected first sample of the second channel signal, the smallest first prediction-error signal generated by the selected first linear prediction method, the smallest second prediction-error signal generated by the selected

second linear prediction method, an information piece representing the selected first linear prediction method and an information piece representing the selected second linear prediction method.

15. (New) A method of network-based communication, comprising the steps of:  
transmitting and receiving a signal of a predetermined transmission packet format to and from a communication line, wherein the signal has been generated by an audio signal encoding method comprising:

implementing matrix operation between a first audio signal and a second audio signal to generate a first channel signal and a second channel signal correlating with each other, the first audio signal and the second audio signal relating to a same sampling frequency;

subjecting the first channel signal and the second channel signal to lossless encoding to convert the first channel signal and the second channel signal into an encoding-resultant signal from which a decoding side can reproduce the first audio signal and the second audio signal;

wherein the subjecting step comprises:

1) selecting a first sample among samples of the first channel signal for every prescribed interval of frame;

2) selecting a first sample among samples of the second channel signal for every prescribed interval of frame;

3) selecting one from first different linear prediction methods and predictively encoding the first channel signal according to the selected one of the first different linear prediction methods, wherein the first different linear prediction methods are of predicting the first channel signal from a past condition of the first channel signal **to generate first different prediction signals for the first channel signal**, and generating first prediction-error signals representing differences between the first channel signal and the first different prediction signals respectively, and wherein the first linear prediction method selected generates a smallest of the first prediction-error signals;

4) selecting one from second different linear prediction methods and predictively encoding the second channel signal according to the selected one of the second different linear prediction methods, wherein the second different linear prediction methods are of predicting the second channel signal from a past condition of the second channel signal **to generate second different prediction signals for the second channel signal**, and generating second prediction-error signals representing differences between the second channel signal and the second different prediction signals respectively, and wherein the selected second linear prediction method generates a smallest of the second prediction-error signals; and

5) generating a signal of a predetermined format having a header information area and a user data area, wherein the user data area includes an audio packet, **and loading the header information with SCR information and loading the audio packet with the selected first sample of the first channel signal**, the selected first sample of the second channel signal, the smallest first prediction-error signal generated by the selected first linear prediction method, the smallest second prediction-error signal generated by the selected second linear prediction method, an information piece representing the selected first linear prediction method and an information piece representing the selected second linear prediction method.